

Claims

- [c1] 1. A magazine-based data cartridge library comprising:
- a frame;
 - a shelf system, operatively attached to said frame, for supporting at least two data cartridge magazines and comprising at least one shelf;
 - a cartridge transport device, operatively attached to said frame, for moving a data cartridge between a data cartridge magazine and said drive;
 - a magazine transport device, operatively attached to said frame, for moving a data cartridge magazine; and
 - a drive bay assembly for holding a drive.
- [c2] 2. A magazine-based data cartridge library, as claimed in claim 1, wherein:
- said drive bay assembly comprising:
 - a housing structure that defines a first open side which is exposed to said cartridge transport device, a second open side which is exposed to a space that is operator accessible, and a passageway extending between said first and second open sides;
 - a housing plug that is attached to said housing and faces said second open side; and
 - a sled for holding a drive that has a front side with a receptacle for receiving a data cartridge and a back side with a plug

interface for receiving electrical signals;
said sled comprising:
a sled frame that extends from a first end to a second end and
is capable of holding a drive such that the receptacle of a drive
is adjacent to said first end and the plug interface of the drive
is adjacent to said second end; and
electrical connection means for establishing an electrical
connection between the plug interface of a drive and a sled
plug that faces toward said first end of said sled and is
capable of mating with said housing plug;
wherein when said sled is positioned in said passageway such
that said first end of said frame is adjacent to said first open
side and said second end of said frame is adjacent to said
second open side, said housing plug faces said sled plug.

[c3] 3. A magazine-based data cartridge library, as claimed in
claim 2, wherein:
said housing comprising a mounting flange for interfacing with
a mounting structure.

[c4] 4. A magazine-based data cartridge library, as claimed in
claim 2, further comprising:
a door assembly that is attached to said housing and
moveable between a closed position that blocks said
passageway when said sled is not positioned in said
passageway and an open position when said sled is

positioned in said passageway.

- [c5] 5. A magazine-based data cartridge library, as claimed in claim 2, wherein:
said sled frame comprising a casing that defines an interior space for accommodating a drive and an opening for exposing the receptacle of a drive when a drive is located in said interior space.
- [c6] 6. A magazine-based data cartridge library, as claimed in claim 5, wherein:
said electrical connection means comprises a device plug, located within said interior space defined by said casing, for mating with the plug interface of a drive.
- [c7] 7. A magazine-based data cartridge library, as claimed in claim 5, wherein:
said sled comprises a fan for moving air from said interior space of said casing to an environment that is exterior to said casing.
- [c8] 8. A magazine-based data cartridge library, as claimed in claim 2, wherein:
said sled being able to hold two, half-height drives.
- [c9] 9. A magazine-based data cartridge library, as claimed in claim 2, wherein:
said drive bay assembly comprising:

a first guide structure associated with said housing; and
a second guide structure associated with said sled;
wherein said first and second guides structures cooperate
during insertion of said sled into said passageway through
said second open side of said housing to orient said frame
such that said first end of said frame is adjacent to said first
open side of said housing, said second end of said frame is
adjacent to said second open side of said housing, and said
sled plug is substantially aligned with said housing plug.

[c10] 10. A magazine-based data cartridge library, as claimed in
claim 2, wherein:
said electrical connection means comprises a first plug and a
second plug.

[c11] 11. A magazine-based data cartridge library, as claimed in
claim 10, wherein:
said first plug for conveying a power signal and said second
plug for conveying data that is to be written on a medium
located in a data cartridge and/or data that has been read from
a medium located in a data cartridge.

[c12] 12. A magazine-based data cartridge library, as claimed in
claim 10, wherein:
said first plug for conveying data that is to be written on a
recording medium located in a data cartridge and/or data that
has been read from a recording medium located in a data

cartridge by a first half-height, drive; and
said second plug for conveying data that is to be written on a
recording medium located in a data cartridge and/or data that
has been read from a recording medium located in a data
cartridge by a second half-height, drive.

[c13] 13. A magazine-based data cartridge library, as claimed in
claim 12, wherein:
said electrical connection means comprising a third plug
means for conveying power signals to two, half-height, drives.

[c14] 14. A magazine-based data cartridge library, as claimed in
claim 2, wherein:
said sled frame comprising mounting means for use in
attaching a drive to said sled.

[c15] 15. A magazine-based data cartridge library, as claimed in
claim 14, wherein:
said mounting means comprising means for use in attaching
two, half-height drive devices to said sled.

[c16] 16. A magazine-based data cartridge library, as claimed in
claim 14, wherein:
said mounting means capable of accommodating a first drive
with a first mounting interface or a second drive with a second
mounting interface that is different than said first mounting
interface.

[c17] 17. A magazine-based data cartridge library, as claimed in claim 2, wherein:
said sled comprising a handle for facilitating insertion and removal of said sled from said passageway of said housing by an operator.

[c18] 18. A magazine-based data cartridge library, as claimed in claim 1, wherein:
said drive bay assembly comprising:
a housing structure that defines a first open side which is exposed to said cartridge transport device, a second open side which is exposed to a space that is operator accessible, and a plurality of drive bays, each extending between said first and second open sides;
a plurality of housing plugs that are each attached to said housing and face said second open side;
wherein one of said plurality of plugs is associated with each of said plurality of drive bays;
a plurality of sleds, each capable of holding a drive that has a front side with a receptacle for receiving a data cartridge and a back side with a plug interface for receiving electrical signals;
wherein each of said plurality of sleds comprising an electrical connection means for establishing an electrical connection between the plug interface of a drive and a sled plug that is capable of mating with one of said plurality of housing plugs.

- [c19] 19. A magazine-based data cartridge library, as claimed in claim 18, wherein:
said drive bay assembly comprising a processor, attached to said housing, for distributing electrical signals to each of said plurality of housing plugs.
- [c20] 20. A magazine-based data cartridge library, as claimed in claim 19, wherein:
said housing comprising a processor bay for holding said processor and having an opening that is exposed to a space that is operator accessible.
- [c21] 21. A magazine-based data cartridge library, as claimed in claim 20, wherein:
said processor comprising a handle for facilitating insertion/removal of a portion of said processor through said opening.